CLAIMS

1. An apparatus for the handling of a metal strip, wherein the apparatus includes a first coiler and second coiler and a moveable roll, a strip path being defined between a first location and a second location, movement of the movable roll changing the length of the strip path, the apparatus further including a measurer of the angular position of at least one of the coilers and an actuator for the moveable roll, the actuator being provided with signals from the measurer, the position of the moveable roll being defined, at least in part, as a function of the angular position of at least one of the coilers.

2. An apparatus according to claim 1 in which one or both of the coilers are fitted with angular position transducers to measure the angular position of the coiler or coilers during coiling or uncoiling.

3. An apparatus according to claim 1 in which the moveable roll is moved by a roll position controller, such as a hydraulic cylinder.

4. An apparatus according to claim 1 in which a position transducer is used to measure the position of the roll.

5. An apparatus according to claim 1 in which an electronic controller and a servo valve are used to control the position of the roll according to a reference position.

6. An apparatus according to claim 1 which includes a control system which controls the position of the rolls, the control system controls the position of the rolls in response to information from the measurer or measurers.

7. An apparatus according to claim 1 in which a moveable roll is provided between a coiler and a rolling mill stand or other processing stage.

8. An apparatus for the coiling/uncoiling of metal strip characterised by having a moveable roll in the strip path such that movement of this roll changes the length of the strip path to the coiler/uncoiler and further characterized by having a transducer measuring the angular position of the coiler/uncoiler and further characterised in that the position of the moveable roll is automatically controlled as a function of the coiler/un coiler angular position.

9. An apparatus according to claim 8 in which the moveable roll is moved by a roll position controller, such as a hydraulic cylinder.

10. An apparatus according to claim 8 in which a position transducer is used to measure the position of the roll.

11. An apparatus according to claim 8 in which an electronic controller and a servo valve are used to control the position of the roll according to a reference position.

12. An apparatus according to claim 8 which includes a control system which controls the position of the rolls, the control system controls the position of the rolls in response to information from the measurer or measurers.

13. An apparatus according to claim 8 in which a moveable roll is provided between a coiler and a rolling mill stand or other processing stage.

14. A method of handling a metal strip, the method comprising providing a first coiler and a second coiler in a metal strip, passing the metal strip from a first coiler to a second coiler, a strip path for the metal strip being defined between a first location and a second location, a moveable roll contacting the m tal strip between the first location and second location, the method including measuring the angular position of at least one of the coilers and moving the moveable roll so as to change the length of the strip path, the

moveable roll being moved as a function of the angular position of at least one of the coilers.

15. A method according to claim 14 in which the pattern of movement of the moveable roll as a function of the coiler/un coiler angle is chosen to reduce the tension variations caused by eccentricity of the coil diameter.

16. A method according to claim 4 characterised in that the pattern of movement of the moveable roll as a function of the angular position of the coiler/uncoiled is calculated in advance of the coiling operation function of the anticipated eccentricity amplitude of the coil and the geometry of the moveable roll.

17. A method according to claim 16 characterised in that the anticipated amplitude of the eccentricity is based on the material type and/or the material thickness and/or the material temperature and/or the number of laps on the coil.

18. A method according to claim 14 in which an offset is added to the measured coiler/uncoiler angular position in order to phase advance the signal to compensate for the response time of the moveable roll.

19. A method according to claim 18 in which the offset is a function of the coiler drum speed.

20. A method according to claim 14 in which the the control system controls the position of the roll or rolls in response to information from the measurer or measurers in combination with further information, The further information being information about one or more of the thickness of the strip, the material forming the strip, the temperature of the strip, the number of passes of the strip through the rolling mill stand or other process stage, the number of laps of the strip on the coiler, the geometry of the strip length, the geometry of the moveable roll to the rolling mill stand or other process stage,

the geom try of the moveable roll to the further roll, the response time of the mov able roll and the speed of rotation of the coiler.

21. A method according to claim 14 in which the method provides one or more methods by which the system the corrects the calculated eccentricity amplitude to give a corrected eccentricity amplitude.

22. A method according to claim 21 in which the method corrects the calculated eccentricity amplitude by measuring the rotational speed of the coiler, a decrease in speed of the coiler corresponding to the strip being applied over the location of eccentricity resulting in a corrected eccentricity amplitude which is greater than the calculated eccentricity amplitude and / or an increase in the rotational speed of the coiler at an angular position where the strip is applied over the location of the eccentricity resulting in a corrected eccentricity amplitude which is lower than the calculated eccentricity amplitude.

23. A method according to claim 21 in which the calculated eccentricity amplitude is corrected by measuring the tension in the strip and / or by measuring the load on the moveable roll, the method provides that if the tension in the strip increases and / or the load on the roll increases as the strip is applied over the position of the eccentricity then the corrected eccentricity amplitude is greater than the calculated eccentricity amplitude and / or the method providing that if the tension is reduced and / or the load on the roll is reduced as the strip is applied over the location of the eccentricity then the corrected eccentricity amplitude is less than the calculated eccentricity amplitude.

24. A method according to claim 21 in which the calculated eccentricity amplitude is corrected by measuring the coil diameter and particularly the coil diameter for the eccentricity.